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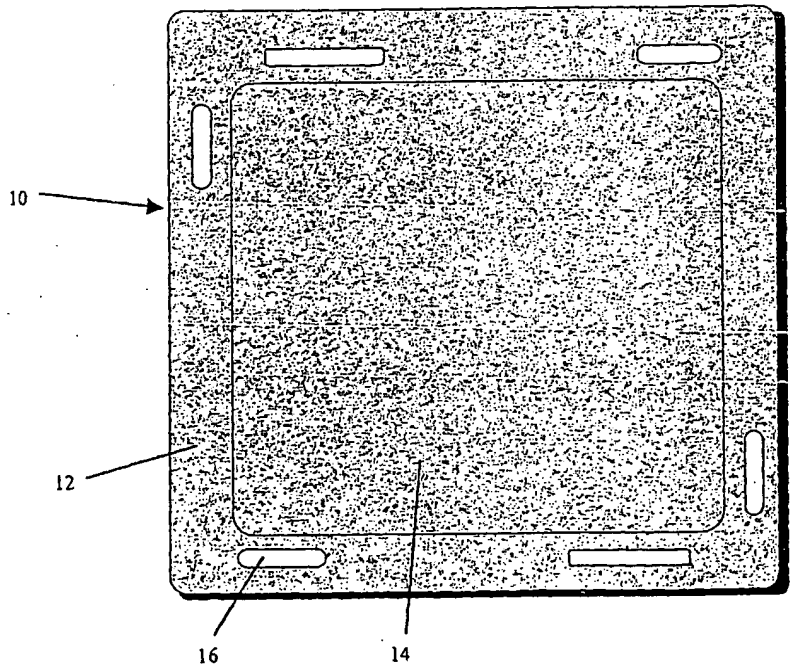
(54) Title: ELASTOMERIC SEPARATOR PLATES AND METHOD OF FABRICATION



(57) Abstract: An electrically conductive flow field separator plate is disclosed for use in a proton exchange membrane fuel cell. The plate comprises a frame portion, a central planar portion within the frame and a flow field formed in a surface of the central planar portion. The frame portion is elastomeric so as to form a seal with adjacent fuel cell components thereby eliminating the use of separate sealing elements. The frame and the central planar portion are of unitary construction and comprise from about 10 wt.% to about 50 wt.% of elastomer and from about 50 wt.% to about 90 wt.% of conductive filler.

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